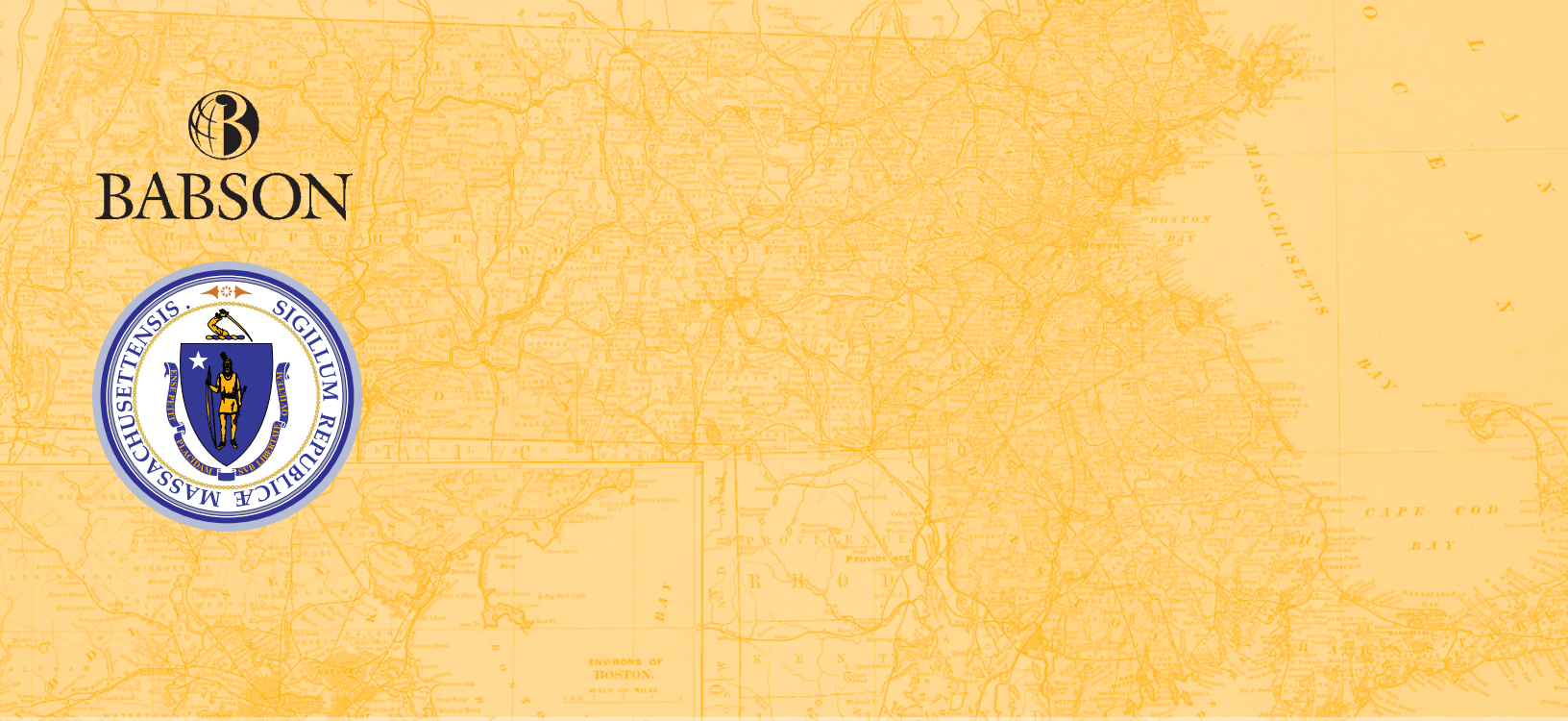

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BABSON ENTREPRENEURSHIP MONITOR

Massachusetts 2008 Report

2008 Babson Entrepreneurship Monitor For the Commonwealth of Massachusetts

Fueling Economic Development Through Entrepreneurship

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Sponsored by: The Massachusetts Workforce Investment Board, The Office of Small Business and Entrepreneurship, The State Office of Minority and Women Business Assistance

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Executive Summary

The Commonwealth of Massachusetts has a tradition of innovation and entrepreneurship.[i] However, the recent economic downturn creates a need to better understand the foundations for entrepreneurial activity. Entrepreneurship fosters job growth, innovation and economic development. It is a key driver of the Massachusetts economy. In turbulent times such as these it is critical that Massachusetts leverage this strength and focus on two key areas: 1) accelerating this high level of entrepreneurial activity through tailored policies and programs targeted toward entrepreneurs in specific regions and industries, and 2) removing the barriers to entrepreneurial growth and sustainability.

For the first time, the 2008 Babson Entrepreneurship Monitor compares similarities and differences in entrepreneurial activity by stage of business development, region, and founder demographics across the Commonwealth. While this study was completed the summer prior to the recent financial crisis of September 2008, the optimism, persistence and resilience of entrepreneurs reflected in this study suggests that early stage founders may offer a solution to the current economic recession. Results show that new businesses are being created more rapidly in Massachusetts than in the U.S. overall, that established businesses are growing, and that entrepreneurs are opportunity driven and optimistic about their success. But, Massachusetts entrepreneurs are not a homogeneous group. In fact, there are vast differences among our entrepreneurs in terms of education, age and gender. Even though the Commonwealth is a small geographic area, there are wide variations across the state in terms of business goals, perceived competition, innovation and use of technology.

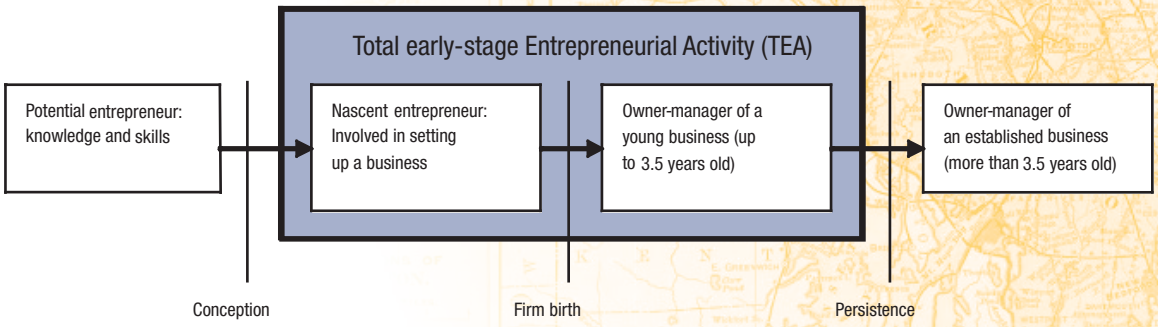
This study followed the well-established survey instrument of the Global Entrepreneurship Monitor project (see the Appendix for details). The GEM methodology takes a broad view of entrepreneurship and focuses on the role played by individuals in the entrepreneurial process.

Unlike most entrepreneurship surveys that measure registered businesses in order to identify newer and smaller firms, this survey measures the behavior of individuals with respect to starting and managing a business.

Therefore, the methodology frames entrepreneurship as a process and investigates people in entrepreneurial activity in different phases of business development: from the very early phase when the business is in gestation to the established phase and possibly discontinuation of the business. Differences between individuals and businesses in the early stages of business activity versus the established businesses are examined.

The data were gathered in July 2008 using a random digit dial telephone survey of 1000 Massachusetts residents. Respondents were asked questions relating to planned business start-ups in the next 3 months, existing business start-ups (businesses < 42 months old) and established businesses (businesses > 42 months old) as well as demographic information, motivations and financing of businesses. Supplementing the telephone survey were interviews of 31 experts (professionals, entrepreneurs, government officials) who provided additional information on the business environment, government policies and programs, training, research and development, as well as commercial and market infrastructure, cultural and social norms. Overall, these interviews provided an indication of the level of promotion and support for entrepreneurship in the Commonwealth.[ii]

Figure 1. The GEM Conceptual Model



Key Findings

OVERALL

1. The Commonwealth of Massachusetts has a higher rate of both early stage and established businesses than the U.S. average. Specifically, the combined rate of early and late state entrepreneurial activity in Massachusetts is 23% compared to 14.1% for the U.S. Average.

DEMOGRAPHICS

2. Early stage entrepreneurs are more likely to be male, non-white, of immigrant status and from a lower level of household income than established business owners.

3. Massachusetts entrepreneurs average 50 years of age. Compared to the national average of 47, early stage entrepreneurs in Massachusetts tend to be older, have a lower fear of business failure, and are more optimistic.

4. Early stage entrepreneurs are at the high and low ends of the educational spectrum, being either high school educated or having more than a college degree. The majority of established entrepreneurs are high school educated.

5. New businesses tend to be started by individuals who are already working full-time.

6. Most businesses are started by a single founder rather than a team.

7. Most entrepreneurs are motivated by opportunities, but certain geographic and demographic groups are more likely motivated out of necessity.

OUTLOOK AND CHALLENGES

8. More than 90% use technology (computers, Internet, etc.) in their businesses.

9. Half of the businesses reported equal focus on profit and social goals.

10. Early-stage businesses tend to be more innovative in terms of the products and services they bring to market and the technologies they use within the business.

11. Major challenges for early-stage businesses are establishing necessary infrastructure, licensing, permits, and the cost of utilities.

12. Few businesses have more than 10% international customers.

13. Significant opportunities for technology transfer continue to exist.

Public Policy Recommendations

ACCELERATE ENTREPRENEURIAL ACTIVITY

Enhance opportunity for success with more focused training and resources for women, minorities, immigrants, rural populations, and other demographics identified as particular to Massachusetts.

1. Target entrepreneurial training/education and resources to women, minorities, and immigrants, who have greater challenges in accessing funding, major accounts, and government contracts.

   a. Businesses initiated and run by women and minorities currently tend to follow a more modest format in terms of both size and technology.
   b. Developing programs specifically targeted to the growth of sustainable minority-owned and women owned businesses operating in growth industries can serve as a powerful new infrastructure, which in turn can contribute significantly to the overall economic growth of the Commonwealth.
   c. Specialized programming efforts could be made to address groups with special needs, like the non-English speaking immigrant entrepreneurs who would benefit from culture-specific support groups or tailored training and support services.

2. Offer training programs to meet the needs of different motivations and goals for entrepreneurship

   a. Entrepreneurs motivated by necessity and opportunity require different types of counseling and assistance. Necessity motivated entrepreneurs may need more assistance with financial planning, debt management, while opportunity motivate entrepreneurs may need more counseling on market and technology assessment.
   b. Identify ways to support entrepreneurs who have primarily social or economic goals or both.

3. Ensure that rural areas have greater access to education/training and resources through extension services or on-line resources.

   a. Experts recommend the addition of industry specific support groups or programs tailored for particular industries would better meet the needs of lower profile and micro-businesses.
   b. Many 'mature' industries provide wealth and jobs, especially outside the high tech areas of the state. Support for entrepreneurs running businesses should be tailored to the growth stage and technology base of the industry and geographic area.

4. Focus on the particular demographics of Massachusetts entrepreneurs.

   a. Age: Given that the average age of Massachusetts entrepreneurs is over 50, providing access to health care and life insurance is important. Opportunities may exist for retirement and/ or support organizations to mentor and advise in this process.
   b. Employment status: Because many entrepreneurs are still working full time when they start a business, entrepreneurship education and training may need to take place in the evenings, on weekends, or be delivered online to accommodate schedules.
   c. Education level: Owners of established ventures are more likely to be high school educated, whereas those launching new ventures are at the high and low ends of the educational spectrum; they are either high school educated or have more than a college degree. This implies that the appropriate type, level and delivery of entrepreneurial assistance and training might be different depending on the entrepreneur's educational foundation.
   d. Solo entrepreneurship: The high incidence of solo entrepreneurs suggests that a topic for training may be to assist in team building; in particular, how to identify, screen, evaluate and develop team members. Businesses that create jobs and are sustainable over time tend to be founded by a core team of motivated individuals with complementary skills.
   e. Stage of development: Most existing entrepreneurship programs focus on business start-up, therefore a need may be met by initiating educational programs focusing on growth options and associated strategies for obtaining resources, assessing and dealing with competition, capital and financial management, training and developing qualified employees and succession.

5. Focus on workforce education and training.

   a. Overall planned growth by early-stage and established businesses suggests it is important to have a prepared workforce to meet this significant demand.
   b. The rise in immigrant and minority owners suggests that language and cross-cultural understanding are important. The workforce may require training in different languages, if their first language is other than English or if they need a language other than English on the job. Those providing assistance should have cultural understanding of this diversity.
   c. The prevalence of computer use in a wide range of job descriptions suggests a need to train workers in basic computer literacy, technology and internet skills.
   d. Identifying community colleges that would be able partners in developing and implementing these programs should be an essential component of the overall workforce training strategy.

REMOVE OBSTACLES TO ENTREPRENEURIAL ACTIVITY

Expert opinion directed many of the suggestions below.

Simplify government regulation, provide better access to services and contracting, and better leverage existing investments and resources.

1. Streamline business.
    a. Curtail the cost of doing business by streamlining the costs of services, licensing and permitting.

2. Provide better visibility to information and services.
    a. While there are an adequate number of government programs available to new and growing firms, entrepreneurs report difficulty finding services. Digital technologies can be utilized to communicate and facilitate information and services. A web-based portal for technical assistance, a directory of public and private services, and forms required for licenses, DBA certificates, permitting, would be more effective and efficient.

3. Increase access to government contracts.
    a. Ensure access of entrepreneurial businesses to government contracts/purchasing by streamlining and simplifying the bidding process, and ensuring that small business subcontracts are considered.

4. Support access to global markets.
    a. Leverage state and federal resources to support planned exporting and globalization of entrepreneurial ventures. Evaluation of current programs and policies is suggested. Further, there is an opportunity to educate businesses on the benefits, challenges, and processes involved in tapping international markets.

5. Leverage state and federal investment in research through a more effective technology transfer process.
    a. Massachusetts research universities and laboratories represent a distinct competitive advantage which should be aggressively leveraged.
    b. Policies to promote investment in new technologies should be encouraged.
    c. Aggressive commercialization/incubation of new technologies using public- private partnerships between research institutes and universities and entrepreneurial companies promote economic growth and jobs and should be explored. High tech scientists and executives should be strongly encouraged to populate high potential teams for economic opportunity.

2008 BABSON ENTREPRENEURSHIP MONITOR FOR THE COMMONWEALTH OF MASSACHUSETTS: Fueling Economic Development through Entrepreneurship

The Commonwealth of Massachusetts has a lengthy history and tradition of innovation and entrepreneurship.[iii] The 2008 Babson Entrepreneurship Monitor shows strong evidence of entrepreneurial activity among new start-up and established businesses. This study surveyed individuals about their activities involved in starting and running businesses. Different from other studies, it is a social survey of people, rather than identification of registered businesses, and it tracks people, rather than counting numbers and types of businesses. Therefore, it provides a strong indicator of entrepreneurial activity among those who are planning to start, in the process of starting or actively engaged in running businesses.

HOW DOES MASSACHUSETTS COMPARE?

Massachusetts is one of the most entrepreneurial states in the U.S. The Commonwealth has an overall higher rate of entrepreneurial activity (23.2% versus 14.1% for the U.S. overall), and tops the U.S. average and that of high and low income countries for established business participation (13.5%) (see Table 1). The rate of early stage business activity in Massachusetts is similar to the U.S. sample, and shows greater activity than high income countries. These results suggest that Massachusetts has a more entrepreneurial economy compared to the U.S. on average and is stronger than the average of high income countries.

Table 1: Comparing Entrepreneurial Activity in Massachusetts, U.S. and the Globe*

	Early Stage Businesses	Established Businesses	Overall
Massachusetts 08 (n=1000)	9.7	13.5	23.2
Overall U.S. 07 (n=2000)	9.6	5.0	14.1
High Income Countries 2007	6.1	5.2	11.3
Low Income: Latin American Countries 2007	16.5	8.5	25.0
Low Income: Europe and Asia 2007	6.1	2.6	8.7
Overall Global 2007	9.5	6.9	16.4

*Overall percents across rows may not sum exactly as individuals may have both early and established businesses and are counted only once in overall.

ENTREPRENEURIAL ACTIVITY ACROSS THE STATE

In 2008, approximately 9.7% individuals surveyed in Massachusetts were engaged in early stage businesses, and 13.5 % owned or managed an established business (see Table 2). Not surprisingly, there are more people in established businesses than in start-ups, with the Greater Boston area being the location of highest activity for both. Founding rates are lowest in more rural Western Massachusetts, while established rate is lowest in Northeastern Massachusetts.

In analyzing regional differences across the state, two key issues emerged from experts regarding the physical infrastructure and communication structure. About half of the experts agreed that the physical infrastructure in Massachusetts—including roads, utilities, communications, and waste disposal—provides good support to for new and growing firms. But others noted that while the transportation infrastructure is generally strong between regions/townships and the Greater Boston area, a clear need exists for better roads between regions and towns, especially given the recent rise in transportation costs. One expert suggested that improved worker-level transportation including the addition of trains, improved routes and other systems could counter the rising cost of living.

ENTREPRENEURIAL ACTIVITY AND INDUSTRY SECTOR

As the survey questions for this project were based on the Global Entrepreneurship Monitor, the industry sectors measured are those most prevalent on a global basis: business services, consumer-oriented, transforming, and extractive. Massachusetts businesses are most active in business services (37.7%) and consumer products/services (34.5%). Established businesses are engaged in business services (accounting, consulting), while more early stage activity is in consumer-products/services (retailing, foods, services) (see Figure 2). While it is hard to say if there is an emerging trend, the greater incidence of early stage entrepreneurs in transforming business areas (such as manufacturing, wholesale and transportation) suggests that basic industries are alive and well. Clearly, the heart of the Massachusetts economy rests on established businesses in the business services and consumer products/services sectors. By contrast, the U.S. overall has 34.8% of businesses engaged in business services, 42.1% in consumer oriented industries, 21.2% in transforming industries, and 1.95% of business in extractive areas.

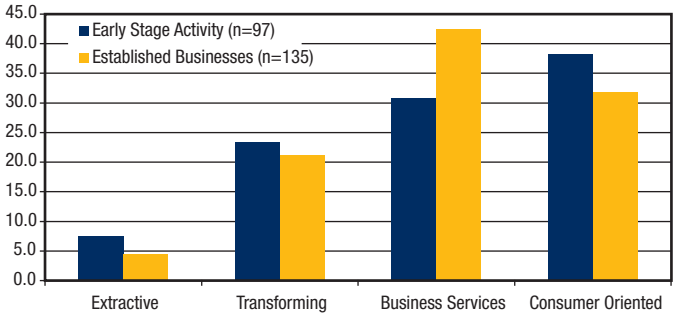
The apparent differences in early stage and established businesses may represent new possible industry shifts back to basic industries and away from business services. But, it is hard to tell if these new businesses are more or less technology intensive.

Table 2: Percent of Individuals Starting New Businesses and Owning Established Businesses by Region*

	Early Stage Businesses	Established Businesses	Massachusetts Overall**
	n=97	n=135	n=232
West Mass	8.5	13.8	22.2
NE Mass	9.0	10.4	19.4
Greater Boston	11.2	15.1	26.3
SE Mass	8.6	12.0	20.5
Overall Mass	9.7	13.5	23.2

*Includes both registered and unregistered businesses and individuals planning to start a business within 3 months
**May not add to 100% if an individual has both a new and established business

Figure 2: Percent of Early Stage Businesses and Established Businesses by Industry Sector*



*** Industry Sector Definitions**

Extractive: agriculture, forestry, fishing, and mining
Transforming: construction, manufacturing, transportation, and wholesale distribution
Business Services: where the primary customer is another business
Consumer-Oriented: where the primary customer is the individual (i.e., retail, restaurants & bars, lodging, health, education, social services, and recreation)

ENTREPRENEURIAL OPPORTUNITY AND CULTURE OF MASSACHUSETTS

Massachusetts entrepreneurs have comparatively low fear of failure compared to the U.S. overall. Entrepreneurs and non-entrepreneurs are quite similar in their views that starting a business is a good career choice and that entrepreneurship leads to status. Established business owners reported only slightly more confidence in their start-up skills (87.6% v. 80%) but significantly less optimism about future opportunities than early stage entrepreneurs (43.1% v. 62.1%)(see Table 3).

Expert data supports these perceptions. They believed there are plenty of good opportunities for new ventures in Massachusetts. The Commonwealth has a strong "culture of achievement and entrepreneurship" rooted in historical traditions of independence, self-reliance, creativity and experimentation. Most of the experts agreed that Massachusetts culture rewards and encourages individual efforts and personal initiative. More than 25 of the experts agree that entrepreneurs are highly respected in Massachusetts and 18 (60%) felt that entrepreneurship is considered a desirable career in Massachusetts. More than 80% of the experts believe that successful entrepreneurs have high status and respect, are competent and resourceful individuals.

Conversely, some experts expressed a sentiment that the Commonwealth was perhaps stymied by tradition, focused on a "big corporate" business mindset and slow to change. Some said the cultural climate was conservative with regard to risk-taking and creativity. They were somewhat pessimistic about the business prospects, especially in the low-tech, low-growth categories. At the same time, experts believed that opportunities for high growth firms are far fewer. A perception that corporations and the government are less open to using entrepreneurial companies as suppliers also presents a challenge.

Experts agreed that new and growing firms face high costs of market entry and that entry can be blocked easily by competitors already in those markets. A variety of factors influence the ability of new firms to enter the market and, according to experts, the current state of the regional economy poses particular challenges to new businesses in Massachusetts. There was a consensus that the rising costs of labor, real estate, and energy products deter new business and send growing firms out of state. The issue of affordable housing was of particular relevance to experts where younger workers are concerned. Recommendations included strengthening 40B laws regarding affordable housing requirements and placing a focus on city-center housing near workplaces.

Overall, there is an apparent paradox in these expert opinions. There is a strong culture of encouraging and accepting entrepreneurship, and there is perceived opportunity. However, it is a challenge for entrepreneurs to exploit these opportunities and enter markets.

Table 3: Perceptions of the Environment and Self by Business Stage

	No Entrepreneurial Activity (n=768)	Early Stage Businesses (n=97)	Established Businesses (n=135)
Sees Good Start-Up Opportunities in the Next Six Months	29.1	62.1	43.1
Has the Required Knowledge and Skills to Start a Business	42.9	80.0	87.6
Fear of Failure Would Prevent from Starting a Business	26.1	15.5	16.4
Starting a Business is a Good Career Choice	60.5	64.0	58.5
Successful New Business Leads to Status	74.5	79.3	74.3
Personally Knows an Entrepreneur in the Past Two Years	55.6	60.9	50.6

WHO ARE THE MASSACHUSETTS ENTREPRENEURS?

Understanding who Massachusetts entrepreneurs are is important for developing programs and policies designed to serve them.

Gender

Both women and men are well represented among entrepreneurs in Massachusetts. Even though more than 60% of those in the entire sample (600) were women, men are more often involved in entrepreneurship than women. Of those surveyed, 12.9% were men in early stage ventures, while 15.8% were men in established businesses (see Table 4). About 12.1% of those surveyed were women in established businesses and 7.7% were women in start-up ventures. While the relative proportion of women in each type of business is the same, in Massachusetts there are slightly more women in early stage and established businesses than the national average.

Race

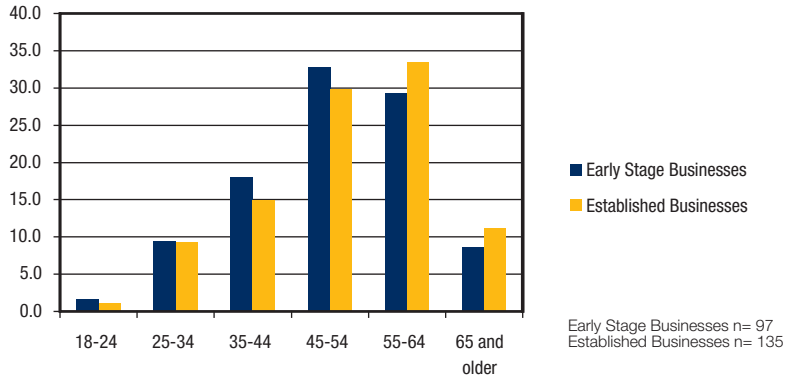
Of those surveyed, over 90% self-identified as White/ Caucasian and less than 10% (about 100) were immigrants. But, in examining the participation rates by race and immigrant status, we see that Black and Hispanic/ Americans were more frequently engaged in early stage businesses than White/Caucasians (see Table 4). Moreover, while non-immigrants in Massachusetts own/manage the majority of businesses in the state, a higher number of immigrants are involved in early stage businesses.

To understand the implications of this table, it is important to remember that 9.7% of the 1000 surveyed were engaged in early stage activity and 13.5% worked in established businesses. If we consider the trends implied by variations of race, immigrant status, and gender, it is apparent that sub-populations (other than white men) are increasingly engaged in the start-up process. We can therefore conclude that there is opportunity in the Commonwealth for different types of entrepreneurs. But, given what we know about language, cultural and socio-cultural differences, it may be necessary to tailor policies, services, training, and education to these different sub-populations. One expert also reported a need for training programs in languages other than English—a point that relates directly to the changing demographics in the Commonwealth of Massachusetts.

Table 4: Entrepreneurship Participation Rates by Race and Immigrant Status

	Early Stage Businesses (n=97)	Established Businesses (n=135)
White/Caucasian	21.4%	50.9%
Black/African American	41.9%	18.0%
Hispanic/Latino American	36.8%	31.1%
Immigrant	61.1%	23.3%
Non-Immigrant	38.9%	77.0%

Figure 3: Entrepreneurial Participation by Age Group and Business Stage



Age

Massachusetts entrepreneurs tend to be older than the national average of 47. Early stage entrepreneurs average 50 years old while established business owners are 51. Important differences emerged in this study of entrepreneurs at the early stage of business activity and at the established business stage (see Figure 3). Not surprisingly, there are the fewest entrepreneurs running established businesses between the ages of 18-24, and the largest number between the ages of 45-54. But more interesting, we see that entrepreneurs engaged in early stage are well represented across all ages from 25-65. Clearly age is not a deterrent in starting businesses in Massachusetts.

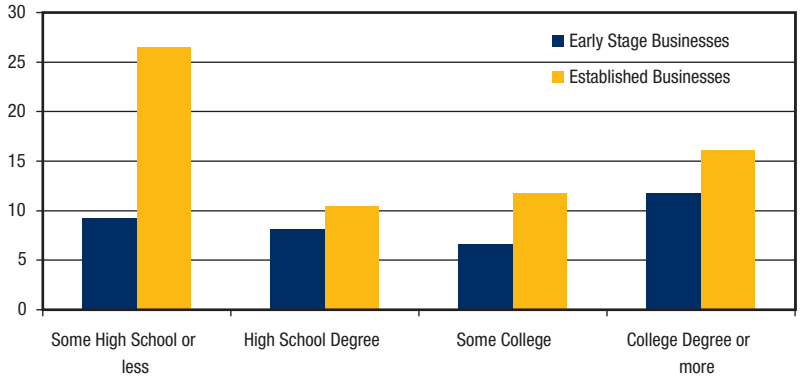
Education

Education is a factor linked to successful business start-up. On average, entrepreneurs in Massachusetts are fairly well educated and mirror the national findings. We find that the majority of early stage entrepreneurs are either high school educated or have more than a college degree (see Figure 4). In other words, business ownership is at the high and low ends of the educational spectrum. This implies that the type of training, workshops and programs for start-ups may need to be tailored to these opposite levels of education. By comparison, established businesses are far more likely run by those with high school or less education. This also suggests that training and support for established business owners should take into account the predominance of high school educated entrepreneurs.

Expert interviews provided a deeper understanding of educational qualifications of Massachusetts entrepreneurs. They suggested there was a lack of preparation at the primary and secondary levels of education in terms of a basic understanding of market principles. Several experts also called for more technical and vocational schooling for high school students, noting especially that hands-on business experience may be particularly important for students who move directly into trade rather than pursuing higher education. Given the high percentage of high school educated entrepreneurs, a possibility is to increase the entrepreneurship offerings in high school, vocational and technical schools.

Even though Massachusetts rates higher than most states in terms of overall participation in entrepreneurship (at 23.2%), the experts feel that more can be done "to plant the seed of entrepreneurship" at the high school level so that students clearly see it as a career option.

Figure 4: Entrepreneurship Participation by Level of Education



Employment Status

The majority of all entrepreneurs surveyed were working full time. For those entrepreneurs planning to start a business and in early stages, 60% were employed full time, 13% worked part time and 4.3% were unemployed. The high percentage of entrepreneurs employed full time in the early stages is not surprising in that most entrepreneurs require funds to support themselves, as new ventures typically do not return a profit (or salary to the owner) for an average of 6 months. For established owners, nearly 70% were employed full time in their ventures while 17% worked part time.

Household Income

Starting and managing a business is tied to household income. For start-ups, household funds are often used to seed fund the new business. For established businesses, profits from the business may be the source of household income. Established business owners in Massachusetts enjoy higher levels of income compared to early stage entrepreneurs (see Table 5). About 43% of the early stage entrepreneurs reported a household income greater than $100,000 per year, compared to 56% of the established business owners. Not surprisingly, early stage businesses are clustered at the lower end of the household income scale, with more than 36% earning under $50,000 while only 24.4% of established businesses are in this category.

Table 5: Household Income

	Early Stage Businesses (n=97)	Established Businesses (n=135)
<14,999	10.2	4.1
15,000-24,999	6.0	3.0
25,000-34,999	12.3	7.7
35,000-49,999	8.7	9.6
50,000-74,999	7.4	11.4
75,000-99,9999	7.5	14.4
100,000-149,999	14.9	14.9
150,000-199,999	13.0	13.2
>200,000	15.1	28.0

WHAT ARE THE MOTIVATIONS FOR STARTING A BUSINESS?

It is important to understand the motivations of entrepreneurs in order to spark entrepreneurial activity. Why do people become entrepreneurs? Motivations are usually a combination of situational, environmental and personal factors. Overall, most U.S. entrepreneurs are motivated by the pursuit of a good businesses opportunity rather than the lack of a good work alternative (necessity) as is more common in lower income countries. The same holds in Massachusetts where more than 83% of all entrepreneurs were opportunity-driven and only 17% were necessity-driven.

Across the state, most entrepreneurs are motivated by independence. The second major motivator is to increase income, followed by other considerations. Different patterns of motivation emerge not only between early and established businesses, but also by region. Entrepreneurs in early stages are more often motivated by independence than established owners, and this pattern of similarity is reflected among entrepreneurs in the Greater Boston area and Southeastern Massachusetts. While early stage entrepreneurs in Western and Northeastern Massachusetts are motivated primarily by independence, established entrepreneurs in these regions have stronger economic motivations.

It is difficult to know whether the source of the motivation comes from a current job situation that is constraining, or lower paid. However, the high incidence of desire for greater independence suggests that Massachusetts entrepreneurs may just want to be their own boss.

BUSINESS CHARACTERISTICS

Founding Team

Most new businesses in the state are launched by single founders (45.7%), compared to almost two thirds of established businesses (64.6 %). In other words, the vast majority of entrepreneurs are starting and running their businesses alone, without the benefit of a partner or teammate. The range of founding team sizes for new businesses was 1-15, with the average size being 4. For established businesses, the founding teams ranged from 2-100, with the average size being 7. Research suggests that businesses started and run by teams are more likely to sustain over the long term (Bygrave & Zacharakis, 2007)[iv], hence assistance with team building might be a valuable area of training or entrepreneurial development.

Business Goals

Over half of the early-stage entrepreneurs reported starting their businesses with equal focus on profit and social benefit, while less than a third launched with solely economic goals. Across the Commonwealth, there is wide variation in business goals. Early stage businesses in Western and Northeastern Massachusetts pursued both social and economic goals, while those in Greater Boston tend to have a stronger profit focus (see Table 6). Non-profits are more often found in Greater Boston and Southeastern Massachusetts.

Business goals for established businesses present a contrasting profile: 50% of established businesses more often pursue solely profit objectives, while in Northeastern Massachusetts, more than 78% focus on profit goals (see Table 7). Established businesses in Western Massachusetts have the highest proportion of mixed social and economic goals (43.3%), followed by Southeastern Massachusetts (41.9%).

Overall, the mixture of social and economic goals was higher than expected. Traditionally, entrepreneurs seek profits as their primary objective, but increasingly new ventures have more social concerns.

Table 6: General Business Goals of Early Stage Entrepreneurs (n= 97)

Business Goals	Overall Mass (n=97)	West Mass	NE Mass	Gtr Boston	SE Mass
For Profit - primarily economic	30.3	33.3	14.3	36.4	21.4
For Profit - primarily social	0	0	0	0	0
For Profit - equally economic and social	53.0	66.7	57.1	48.5	5.00
Not for profit - only for social benefit	6.1	0	0	9.1	7.1
Other	10.6	0	28.6	6.1	21.4

Table 7: General Business Goals of Established Business Owners (n= 135)

Business Goals	Overall Mass (n=135)	West Mass	NE Mass	Gtr Boston	SE Mass
For Profit - primarily economic	50.0	46.7	78.6	43.3	54.8
For Profit - primarily social	3.4	3.3	0	5.6	0
For Profit - equally economic and social	37.7	43.3	14.3	38.0	41.9
Not for profit - only for social benefit	3.4	6.7	7.1	6.1	3.3
Other	5.5	0	0	7.0	0

Size of Businesses

The majority of the businesses surveyed are small. The average size of early stage businesses in Massachusetts is about 3 employees compared to an average of 42 employees for established businesses. The largest early stage businesses are found in Western Massachusetts, with an average size of 6 employees, but for all areas, the average is under 6. The largest established businesses are found in the Greater Boston area, with an average size of 80 employees. When we consider the range of employees for businesses surveyed, we see that no early stage venture was larger than 28 employees (see Table 8). But for later stage businesses, we find that some were very large (5,000 employees). As expected, larger businesses are located in the Greater Boston area.

International Market Activity

Significant attention in the survey focuses on the "born global" phenomenon or new businesses targeting markets outside their home country from the point of inception. In Massachusetts, only a very small percentage of businesses identify more than 50% of their customers as outside the U.S. However, nearly half of all businesses (both early stage and established) receive 10% or less of their revenues from customers outside the U.S. (see Table 9). Early stage entrepreneurs in Northeastern Massachusetts reported the most globalized customer base, in contrast to Southeastern region entrepreneurs who did not report any international customers. The focus on global markets is most prevalent among businesses in the consumer-oriented sector. Overall, it is clear that Massachusetts businesses rely primarily on U.S. markets and customers.

Innovation: Novel Products/Services

The introduction of novel products and services to the market is a key source of competitive advantage in the marketplace. In Massachusetts in 2008, about 14% of the businesses reported the introduction of all new products to customers, compared to only 5.6% of established businesses (see Table 10). When looking across regions, more than 25% of the early stage businesses in Western Massachusetts are introducing all new products/services to the marketplace, compared to only about 17% of businesses in Greater Boston, less than 10% in Southeastern Massachusetts, and none of the early stage businesses in Northeastern Massachusetts. Such a finding challenges popular conceptions of urban center and hi-tech corridors as the most common source of highly innovative new businesses.

The experts pointed out that the science and technology base in Massachusetts supports the creation of world-class new technology-based ventures. More than half the expert sample felt there was strong support for engineers and scientists to commercialize their ideas through new and growing firms. About half of the experts surveyed agreed that technology transfer programs in Massachusetts are efficient, but only a minority said that new firms enjoy equal access to new research technologies and that new technology subsidies are available and affordable. Relatedly, experts believed that companies in Massachusetts like to experiment with new technologies and new ways of doing things and that consumers in Massachusetts value innovation and new products.

Table 8: Median Number of Current Employees by Business Stage and Region

	Early Stage Businesses (n=97)	Established Businesses (n=135)
	Median (Range)	Median (Range)
Western Region	5 (2 to 11)	1 (1 to 40)
Northeast Region	1 (1 to 3)	3 (1 to 200)
Greater Boston Region	1 (1 to 28)	1 (1 to 5000)
Southeast Region	2 (1 to 6)	1 (1 to 15)
Overall Massachusetts	2 (1 to 28)	1 (1 to 5000)

Table 9: Extent of Markets Targeted Outside the U.S. by Business Stage

	Early Stage Activity (n=97)	Established Businesses (n=135)
50% or More of Customers	7.4	4.1
10% or Less of Customers	54.4	48.6

Table 10: Extent of New Products and Services to Customers

New Products/Services to Customers	Early Stage Activity (N=97)	Established Businesses (n=135)
All New	14.3	5.6
Some New	41.4	18.2
Not at all	44.3	76.2

Technology Use

Another measure of innovation in Massachusetts business is the use of technologies within the business itself. Less than 5% of all the businesses in the study reported using cutting-edge technologies less than a year old. But, early stage entrepreneurs use new technologies more often than established businesses. 90% of established businesses use technologies that are more than 5 years old, while 23% of new businesses use technologies 1-3 years old. Companies located in Northeastern Massachusetts were most likely to use technologies less than 1 year old.

Over 90% of both early stage and established businesses used personal computers and the internet (see Table 11). The majority of businesses at both stages of development have company websites and roughly half advertise on the web. Most businesses also use accounting software, although customer relationship software is used by less than a third of both early stage and established businesses. The patterns of software and internet usage are fairly consistent across regions. This use of technology clearly has implications for workforce development. Workers increasingly need to be trained in the use of computers and the internet to even be eligible to work in any type of business in Massachusetts.

A look at expenditures on technology by early stage and established businesses offers further evidence that early stage businesses are leading the innovation trends in Massachusetts. Nearly 20% of early stage businesses reported spending $20,000 or more on technology per year, compared to only 5.7% of established businesses.

Across industry sectors, innovativeness as measured by newness of products and services to consumers appears to be highest for early stage entrepreneurs in extractive industry (agriculture, fishing, farming) and lowest for established businesses in the same sector. Innovativeness in terms of the use of new technologies in the business itself is highest in consumer-oriented and business services among early stage entrepreneurs, but higher among business services and transformative businesses for established owners.

Table 11: Types of Technologies Used by Early Stage Entrepreneurs

	Overall	West Mass	NE Mass	Gtr Boston	SE Mass
Personal Computers	92.5	91.7	100.0	94.1	85.7
Internet	92.5	91.7	85.7	97.1	85.7
Accounting Software	65.2	75.0	71.4	63.6	57.1
Customer Relationship Management Software	28.4	25.0	28.6	26.5	35.7
Web Advertising	52.2	58.3	28.6	54.8	42.9
Email Marketing	43.3	25.0	57.1	44.1	50.0
Company Website	65.7	66.7	71.4	73.5	42.9
Internet Phone (voice over IP)	12.5	16.7	100.0	12.1	15.4
PDA Phones	39.4	16.7	42.9	54.5	21.4
Other Specialized HW or SW	36.9	50.0	28.6	37.5	28.6
Internet Business	14.9	25.0	14.3	17.6	0

Growth and Performance

One very common measure of performance is job creation. The vast majority of businesses expect to grow by adding employees, but consumer-oriented early stage entrepreneurs have the highest expectations. Early stage businesses expected to grow by an average of 66.5% over 5 years, while established firms expected to grow by 50.5% during the same period (see Table 12). But overall, considering raw numbers, established businesses expect to add proportionately more employees. Consumer–oriented businesses such as retail, restaurants or consumer services typically are more labor intensive and have more employee turnover. Further, firms located in the Greater Boston area forecast the greatest growth in size.

Another indicator of business performance is perceived success in the eyes of the entrepreneurs. Entrepreneurs as a group are typically an optimistic group, so it was not surprising to find that 50% of established entrepreneurs believed they were presently successful compared to 38% of new entrepreneurs. The strongest perceptions of business success were found in Western Massachusetts for both groups of entrepreneurs.

To capture a more refined sense of how entrepreneurs in Massachusetts define business success, the survey asked the respondents to allocate a total of 100 points across a set of three different types of business performance – profit, societal, and environmental. The results showed that for the most part, early stage and established business owners define success in similar ways. Over 60% of the points were allocated to profit success on average, compared to about 25% for societal impacts, and around 10% for environmental impact. Early stage businesses assigned more points to environment-related success than to profit-based success.

Summary of Business Characteristics in Massachusetts

To summarize briefly, most early stage businesses in Massachusetts are started by single founders and are in the business services and consumer-oriented sectors. Early stage businesses are quite small with lower expectations for growth and competition compared to established businesses. But, early stage businesses are relatively innovative in terms of the products/services they bring to market, the technologies they use within the business, and a focus on global markets. In fact, early stage entrepreneurs reported the introduction of more new products and services to market and more often made large investments in technology.

In contrast, established businesses reported business success more often and were significantly larger than early stage ventures. They showed much higher growth projections than early stage businesses and were much more likely to report a pure profit motive. About half of the businesses at both stages of development reported a similar focus on both profit and social goals equally.

In terms of patterns across industries and regions, the data showed that business to business companies were also associated with a low global focus and lower expectations of competition compared to other sectors. Western Massachusetts appears to lead the Commonwealth in both the size of new businesses and in the introduction of new products/services to market, while the Greater Boston area leads in use of technology.

Nationally, most businesses are launched with a single founder. Innovation in the form of products and services is higher in Massachusetts, likely because of the concentration of educational and academic institutions in the state.

Table 12: Expected Five-Year Growth in Employees by Business Stage

	Early Stage (n=97)	Established (n=135)
Mean Percent Change	66.5	50.5
Median Percent Change	0	0
Range*	-16.7 to 566.7	-66.7 to 900.0

*Negative number indicates some businesses will be shrinking in the next 5 years

EXPERT VIEWS ON MASSACHUSETTS PUBLIC POLICY

Expert surveys addressed several policy related issues including the workforce in Massachusetts, growth, financial resources, market factors and government policies.

Workforce

Experts reported seeing plenty of good opportunities for new firms and described the workforce as exceptional – well educated and highly skilled in all areas from professional services to biosciences and manufacturing industries. The Commonwealth's higher education system does a particularly fine job of producing a large pool of talented, young entrepreneurs each year.

Business Assistance

While there are excellent education programs and consulting services at higher educational institutions targeted to new and growing businesses each year, the majority of experts believed that entrepreneurs in general need external assistance with their plans prior to start-up. Most would-be entrepreneurs do not know how to start and manage a new business, a small business, or a high-growth business, or to organize the resources needed.

Financial Resources

Of central importance to new businesses is the availability of financial resources, including equity and debt capital, grants and subsidies. Some of the strengths of the financial infrastructure included the diversity of lenders, including small community banks, credit unions, and small lenders, angel investor groups, grant programs, and a strong venture capital industry. One expert, in fact, stated that "Massachusetts is leading the nation with the availability of capital for high growth ventures."

Furthermore, three quarters of the experts surveyed agreed that sufficient venture capital and private equity (angels, private investors) funding is available for new and growing firms. Less than 40 percent of the experts surveyed agreed that sufficient debt funding is available for new and growing firms, and only one fifth of the expert sample agreed that sufficient government subsidies are available for new and growing firms.

However, there is a view that only certain businesses have access to growth and equity funding.

Several experts argued that equity funding decisions are based on businesses that are "hot" at the moment (e.g., film, biotechnology, or high technology firms) or based on arbitrary projections and perceptions of future opportunities. But even high tech ventures face challenges, because the rules often change.

For ventures that are outside the "hot" technology sectors, there is uneven access to capital. Two issues emerge. First, the sources of funding for micro-enterprises and small businesses may not match the needs of the business. For instance, loan sizes may be inappropriate, interest rates may be too high, and the criteria for the loan may not fit the growth needs (e.g., prototype and facilities development rather than business development). Second, smaller businesses may take a "backwards approach," as one expert put it, and resort primarily to "use credit cards until they hit the wall before looking for available money."

In addition to these concerns, the poor state of the U.S. economy is an additional challenge for small firms seeking financing. Bank lending is off 30 percent from last year due to the credit crunch, resulting in a general concern about lending to small businesses. In addition, the fall in housing prices has meant a fall in collateral for new and small firms seeking funding. Finally, "the consolidation in the banking industry has led to a drop in local lending partners who know the people and understand the business models."

Experts suggest that there should be an effort to provide "stop-gap funding to the businesses between start-up and high growth." They suggested that opportunities be provided for funding depending on growth stages, such as intermediate public/private funding options for businesses with a 5-year record of performance, mezzanine funding for promising businesses that reach 20 employees in size, and micro-loan funding (e.g., less than $25,000) with terms more suitable to micro-enterprises.

Most important, better mechanisms connecting new and small firms to funding groups is a first important step. At present, angel funding and investors are disconnected from business owners, especially in Western Massachusetts. There is a need for better, accessible information on how to raise funds, especially regarding the appropriateness of different types of funding for different types of businesses and at different stages of growth.

Current Government Policies

Most experts believe that support for new and growing firms is a high priority. Current government policies are favorable, in particular, the new code of "Government at the speed of business," for its energy incentives and subsidies, and the policy for the small business health insurance plan. In the words of one expert on entrepreneurship and small business in Massachusetts, "The State has created a perfect storm

for fostering entrepreneurship." In this sense, then, the experts appear to have strong confidence in the direction of the current government leadership in Massachusetts.

But, only about a third of the experts felt that taxes and regulations were applied in a consistent and predictable way. The majority felt that taxes were a burden for new and growing firms, and that government policies did not favor new firms. Few believed new firms could manage bureaucracy, regulations and licensing efficiently or that obtaining licenses and permits within a week was possible. Permitting process was described as confusing and inefficient, while it was noted that new/small firms may have difficulty obtaining government procurement contracts because of government reliance on the same vendors over time. Other experts raised the issue of bias toward large and/or "star" firms, especially located in the biotech and hi-tech industries. There was a consensus regarding lack of government support for minority and women-owned start-up initiatives. Indeed, less than 15 percent of experts surveyed agreed that men and women are equally exposed to good business start-up opportunities.

These findings speak to the very dilemma faced by policy-makers and program directors in regional governments. On the one hand, high-growth businesses are believed to introduce important new technologies to the marketplace and to create many new jobs that will benefit the local economy. On the other hand, projected high-growth businesses also represent a gamble on the part of investors, including regional governments, and do not necessarily address concerns of region-specific economic development. Moreover, they do not necessarily support a diverse and healthy business community, including the types of non-high-growth businesses often created and run by immigrants, minorities, and women and in industries outside of high-technology and business services.

Appendix

THE GLOBAL ENTREPRENEURSHIP MONITOR

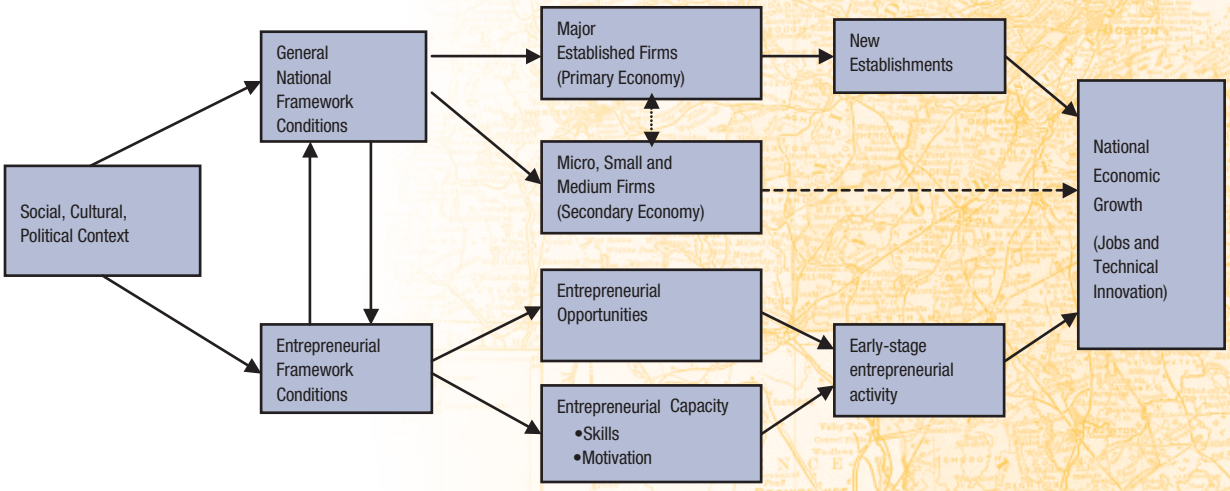
The data collection, analyses and written report were conducted using the guidelines of the Global Entrepreneurship Research Association (GERA). The methodology used is similar to that of the Global Entrepreneurship Monitor (GEM). Since the first global report was published in 1999 by scholars at Babson College and London Business School, GEM is the longest and largest research project studying entrepreneurship and has developed into one of the world's leading research consortia concerned with improving our understanding of the relationships between individual perceptions of entrepreneurship, entrepreneurial activity, and national economic growth. To this end, the project has, from the start, been designed as a multinational, harmonized research program providing annual assessments of the entrepreneurial sector for a range of countries. Results have implications for policy, training and education across new ventures, established ventures and the Massachusetts workforce. This research was sponsored by the Commonwealth of Massachusetts and Babson College.

GLOBAL ENTREPRENEURSHIP MONITOR RESEARCH METHODOLOGY

Although it is widely acknowledged that entrepreneurship is one of the most important forces shaping the changes in the economic landscape, the understanding of the relationship between entrepreneurship and national growth is far from complete. There is a lack of cross-national harmonized data sets on entrepreneurship. Since the first year of data collection in 1999, the Global Entrepreneurship Monitor Research Association has contributed to increasing knowledge in this area by collecting relevant harmonized data on an annual basis. GEM focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors determining national levels of entrepreneurial activity
- To identify policies that may enhance national level of entrepreneurial activity

Figure 5: GEM Theoretical Framework



Traditional analyses of economic growth and competitiveness often neglect the role played by individuals in the form of new and small firms in the economy. GEM takes a comprehensive approach and considers the degree of involvement in entrepreneurial activity within a country. GEM views national economic growth and the aggregate level of economic activity in a country as being associated with newer and smaller firms as well as established firms, but its focus lies in early stage entrepreneurial activity. Small and newer firms generate innovations, fill market niches, and increase competition, thereby contributing to resource reallocation in economic activity. By considering the complementary nature of economic activity among different groups of firms, GEM links a nation's economic activity to the interplay of established and new and smaller firms, and it allows a clearer understanding of why entrepreneurship is vital to the whole economy. Figure 2 presents the conceptual framework that guides GEM's data collection activity. The GEM model maintains that established business activity at the national level varies with General National Framework Conditions (GNFCs), while entrepreneurial activity varies with Entrepreneurial Framework Conditions (EFCs). GEM's unique contribution is to produce cross-national data that enables detailed study of the lower half of the conceptual framework. In this framework, EFCs reflect major features of an economy and host society that are expected to impact the entrepreneurial sector but are NOT captured in the General National Framework Conditions.

A series of expert interviews were also conducted in August and September of 2008. For the purposes of this study, an expert was defined as someone who is directly involved in assessment or delivery of products and services related to one of ten major entrepreneurial framework conditions in the specified region. In this study, the 31 experts interviewed included entrepreneurs, academics, government officials, and other professionals in the field of entrepreneurship and small business in Massachusetts. Consequently, the knowledge these experts shared in the interviews is based on a broad range of experiences and perspectives.

The interviews were composed of two parts: (1) an interview, 45-60 minutes long, regarding detailed perspectives on each of the entrepreneurial framework conditions, followed by (2) a 15-minute survey to collect standardized scale responses to questions regarding each of the entrepreneurial framework conditions.

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Endnotes

[i]See the 2007 State New Economy Index, released by the Ewing Marion Kauffman Foundation and the Information Technology and Innovation Foundation (ITIF).

[ii]Bosma, N., K. Jones, E. Autio, J. Levie. 2008. Global Entrepreneurship Monitor 2007 Executive Report. Babson College, London Business School, and Global Entrepreneurship Research Association (GERA).

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